

Forecast Briefing

Unsettled weather is expected to continue today with numerous showers in the area this morning. These will give way to mostly cloudy conditions this afternoon as the axis of moisture and rainfall moves west of the area. Moisture returns this evening and areas of steady rainfall with tropical downpours and localized flooding are possible from tonight into Wednesday.

Hazards Overview			
Hazard	Severity	Timing	Description
Heavy Rain	Enhanced	Thru Wed	Heavy tropical downpours, flooding possible

Precipitation Probability

Precipitation Probability

Time	Probability (%)
6:00 AM	25
9:00 AM	15
12:00 PM	10
3:00 PM	20
6:00 PM	60

■ Probability

Temperature Forecast

Temperature

Time	Temperature (°F)
6:00 AM	75
9:00 AM	80
12:00 PM	81
3:00 PM	82
6:00 PM	78

■ Temperature

Hourly Breakdown for Th, July 24th 2018						
Time	Weather	Temp	Wind	P. Chance	P. Accum	Hazards
6:00am	Showers	78	SE 5 mph	30%	0.02"	--
9:00am	Isolated Showers	80	SE 5 mph	20%	0.02"	--
12:00pm	Isolated Showers	82	SE 5 mph	10%	0.03"	--
3:00pm	Isolated Showers	80	SE 10 mph	20%	0.03"	--
6:00pm	Showers	77	SSE 10 mph	30%	0.07"	--
9:00pm	Showers	76	SSE 10 mph	60%	0.16"	Hvy Rain

Technical Discussion

A very complex synoptic setup continues across the Northeast states this week. The ebb and flow of a front, situated from north to south throughout the Mid-Atlantic states, has been the source of much uncertainty and variable weather conditions area-wide. The front is sitting on the western periphery of a large Western Atlantic Ridge, also known as a Bermuda High. Tropical moisture is streaming northward along this frontal boundary and providing deep moisture content. Precipitable water values over 2" have been common across the region. Today's forecast provides a bit more clarity and the latest local/regional observations back up those ideas.

The frontal boundary will bend back to the west as the day goes on today, arcing towards Pennsylvania and Maryland. This will allow the focused areas of lift to remain in those areas, with torrential rainfall expected there. In the local region, however, forecast soundings show both decreased low level moisture and saturation as well as only sporadic lift throughout the column. So while the airmass is expected to remain tropical in nature, showers and thunderstorms will only be isolated throughout the majority of the day today.

Later tonight, however, deep layer forcing approaches from the Ohio Valley and ascent pushes into the Northeast. This will push the frontal boundary back to the east and also enhance the deep south/southeasterly flow. The 3km NAM suggests precipitable water values may rise towards 2.75" in some areas from later tonight into Wednesday morning, suggesting the potential for torrential downpours and flooding rains. With the enhanced deep southeasterly flow, forcing arriving from the west, and better synoptic-scale ascent, the potential exists for a larger area of widespread steady/heavy rain when compared with the past few days of sporadic showers.

The current best-idea timing for this heavy rainfall is from late tonight (after 8pm) through the early morning hours of Wednesday, when forecast model soundings suggest fully saturated columns with very impressive forcing. This suggests, again, the potential for at least a band of torrential rainfall. With precipitable water values near 2.75" - in the 99th percentile for this time of year - the potential exists for flooding in many areas.

Additional showers are expected to continue on Wednesday as the frontal boundary remains near the area. In fact, a weak disturbance moving northward along the front may actually act to enhance precipitation intensity and breadth once again by Wednesday evening as it moves from the Mid-Atlantic states into New England.

The front remains relatively close to the area on Thursday and it appears that there will be another window of opportunity for organized thunderstorms on Friday, when mid level winds approach 50 knots and a frontal boundary approaches the area. Weak destabilization appears to be the mitigating factor for a more organized severe thunderstorm event, but we will keep an eye on it. Improving weather is expected this weekend - temporarily.

Look Ahead 7-Day Forecast

Date	Weather	Hi Temp	Lo Temp	P. Chance	Wind	Hazards
7/25 Wed	Rain Likely	80	71	90%	SE 10 mph	Yes
7/26 Thu	Showers/Storms	84	73	30%	SE 10 mph	Yes
7/27 Fri	Chance Storms	87	75	30%	S 10 mph	Possible
7/28 Sat	Partly Cloudy	86	73	--	NW 10 mph	--
7/29 Sun	Partly Cloudy	82	71	--	NW 10 mph	--
7/30 Mon	Scattered Storms	80	72	50%	S 10 mph	Possible
7/31 Tue	Scattered Storms	80	72	50%	S 10 mph	Possible

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